

IL★2 STURMOVIK

CLIFFS OF DOVER

BLITZ

DESERT WINGS

TOBRUK

Getting Started & Troubleshooting Guide

Table of Contents

DESERT WINGS - TOBRUK.....	5
Installation Guide	5
PURCHASING THE GAME	5
Purchased from the 1C Shop or IL2 Store	6
Purchasing through Steam.....	7
INSTALLING THE GAME	8
Before installing	8
Installation instructions	9
SETTING UP.....	12
Options – Pilot.....	13
Options – Plane	13
Options - Realism.....	14
Options - Controls	15
Power Management of your USB ports.....	16
Calibrating your joystick	17
Options – Video	29
Options - Audio.....	30
Options - Network.....	32
Aircraft Manuals	33

SINGLE PLAYER.....	34
Training	35
Quick Missions.....	35
Single Missions	36
Campaigns.....	36
 MULTIPLAYER	 37
Logging into a server.....	37
Choosing a side	38
Choosing an airfield	39
Choosing an aircraft	40
Customizing your aircraft.....	41
Squadron markings.....	41
Plane loadouts.....	41
Spawning in	43
Spawning out	44
Information Windows	44

TROUBLE SHOOTING.....	51
My joystick axis and key assignments have suddenly disappeared.....	51
Invest in a powered USB hub.....	51
JoyToKey.....	51
Use the “devreorder” utility.....	52
Can’t Join a Multiplayer Server.....	53
IL-2 Sturmovik Cliffs of Dover Blitz won’t launch!.....	54
Screen freezes, stuttering or lag. Please try the following.....	54
Beige or grey square or rectangle on my screen.....	54
Zoom View feature.....	55
In a Campaign my aircraft won’t move and noses over instead!.....	55
Is there any chance of Oculus Rift Support?.....	55
‘Invisible’ tracers?.....	55
My fighter airplane has no sights!.....	55
Mouse will not activate in-cockpit controls.....	56
How to fire guns in a turret position?.....	56
Mirror doesn’t work or no mirror at all!.....	57
My gunsight is not turned on!.....	57
My joystick/throttle not recognized in IL-2 Sturmovik Cliffs of Dover Blitz!.....	58
 ACKNOWLEDGMENTS.....	 59

DESERT WINGS - TOBRUK

Installation Guide

Desert Wings - Tobruk, the highly anticipated expansion to Battle of Britain flight simulation for *IL-2 Sturmovik: Cliffs of Dover Blitz*, is now live on Steam. Below is a guide towards installing *Cliffs of Dover Blitz* to get you into your virtual cockpit quickly.

In order to be able to fly the Expansion you must first have *IL-2 Sturmovik: Cliffs of Dover Blitz* in your Steam Library.

PURCHASING THE GAME

There are two ways to acquire the product code for **IL-2 Sturmovik: Cliffs of Dover Blitz** & it's DLC **Desert Wings - Tobruk**:

Purchase the product code directly from www.lcshop.eu or <https://il2sturmovik.com/store>

Purchase the game through the Steam Store at <https://store.steampowered.com/>

Steam is the online platform app from which *IL-2 Sturmovik: Cliffs of Dover Blitz* is launched. It is required to play the game. You must register – at no charge – with Steam to create an account. Steam provides two major advantages:

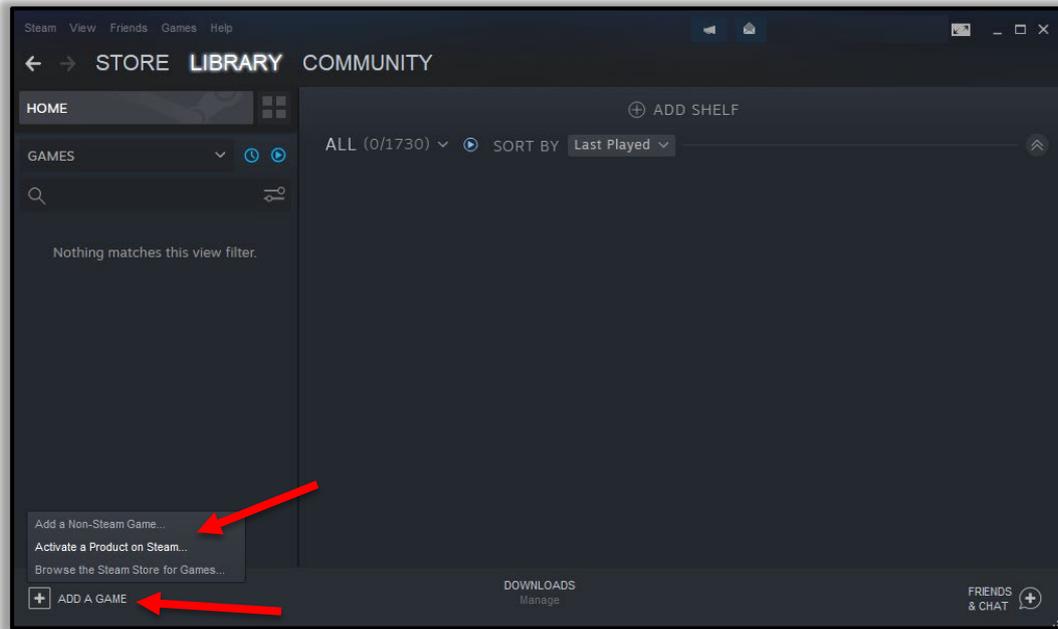
Games and simulations like **IL-2 Sturmovik: Cliffs of Dover Blitz** are easy to install, and frequent updates and improvements are installed automatically when Steam is opened.

Once you have registered and created a Steam account, installing **IL-2 Sturmovik: Cliffs of Dover Blitz** is easy.

Purchased from the 1C Shop or IL2 Store

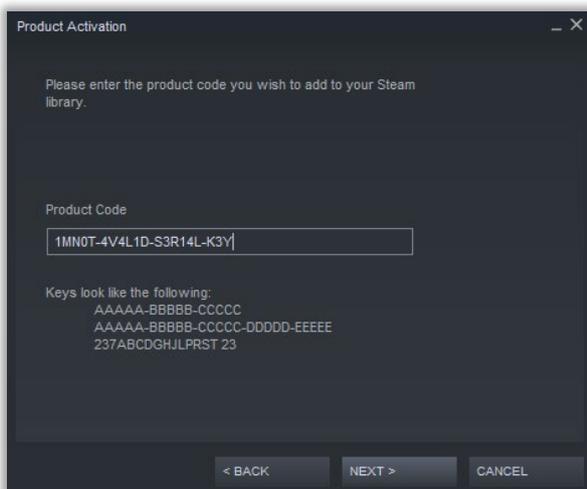
Have the product code handy and open Steam on your PC.

At the bottom left corner, click on “Add a Game +”.



Follow the directions in the “Product Activation” pop-up window.

You will be prompted to enter your product code.



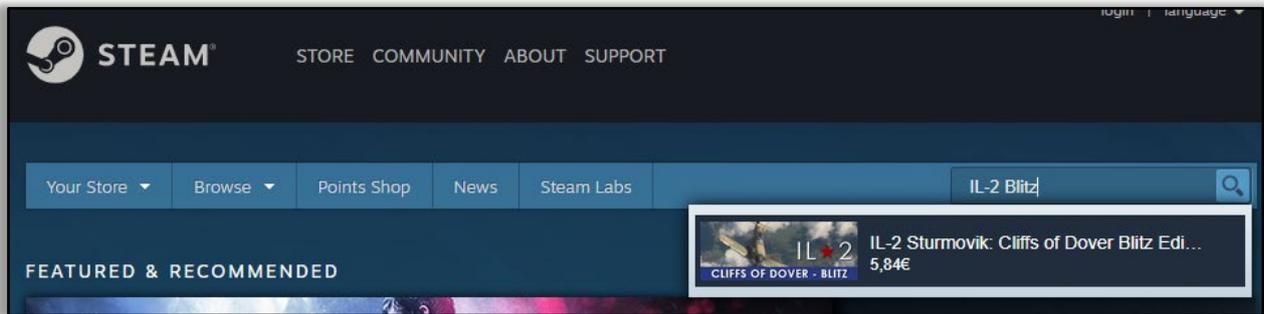
Upon clicking on “Next” your sim will automatically load onto your PC. **IL-2 Sturmovik: Cliffs of Dover Blitz** & if you purchased the DLC **Desert Wings Tobruk** will be both installed by default onto your C: drive unless you manually specify a different drive that you prefer.

Purchasing through Steam

Launch Steam.

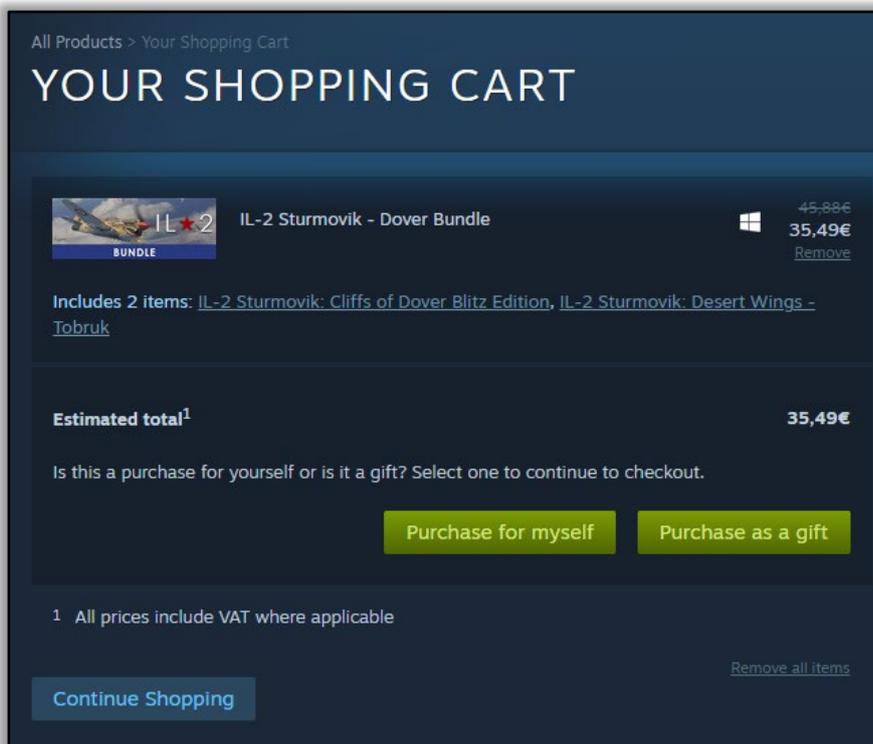
Click on the “STORE” tab at the top of the Steam window.

Enter “**IL-2 Blitz**” in the search window at the right of the opened page.



Click on the pop-up window that appears specifying your choice of “**IL-2 Sturmovik: Cliffs of Dover Blitz Edition**”. This will take you directly to the store page on Steam.

Add this sim to your cart, then go to checkout to arrange for purchase.



Congratulations! You are now ready to install the game.

INSTALLING THE GAME

If you look at your Steam Library, you will see **IL-2 Sturmovik: Cliffs of Dover Blitz Edition** is now listed as a completely new game in your Steam Library.



Before installing

Upgrading to Windows 10 from Windows 7

A number of players have asked why Windows 10 is strongly recommended for **IL-2 Sturmovik: Cliffs of Dover Blitz Edition**. To be sure, **Cliffs of Dover Blitz** continues to play well in Windows 7, unfortunately Win7 is no longer supported by Microsoft for upgrades and, most importantly, security updates. Players will likely find that **Cliffs of Dover Blitz** plays even better in Win10 in terms of smoothness and framerates. Also, USB joystick axis and button assignments are uniquely recognized in Win10 (see Options – Controls on p. 10), so upgrading to Win10 prior to installing **Cliffs of Dover Blitz** will save the player from needing to go through reassigning these peripheral controls all over again.

<https://support.microsoft.com/en-us/help/3159635/windows-10-update-assistant>

Backup your Cliffs of Dover Blitz configuration .ini folders first!

Owners of **CLIFFS OF DOVER - BLITZ**: - Due to a new naming convention in the controls for the devices attached to your computer you may be required to remap some or all of your controls. Best to save your config files first. Then if desired, you can paste them back into the new 'Documents\1C SoftClub\il-2 sturmovik cliffs of dover' folder which will be created.

- Look in your “Documents” folder and re-name your "1C SoftClub\Il-2 Sturmovik Cliffs of Dover" to "1C SoftClub\Il-2 Sturmovik Cliffs of Dover OLD".

Note: If you still have the original "IL-2 STURMOVIK CLIFFS OF DOVER" (i.e. version 3.xxx) game on your PC, then please uninstall the game.

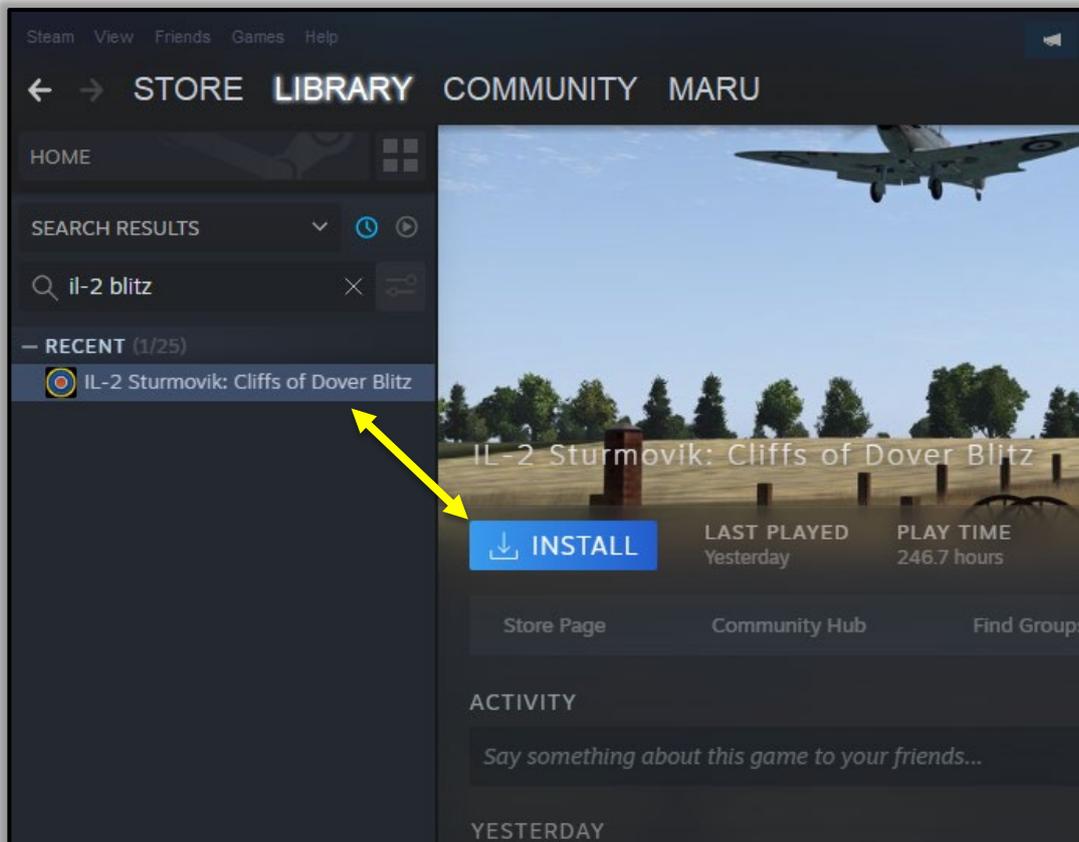
Installation instructions

Launch Steam.

Click on Library.

You now have **IL-2 Sturmovik: Cliffs of Dover Blitz** listed (note the yellow arrow).

Click on Install (note the yellow arrow).

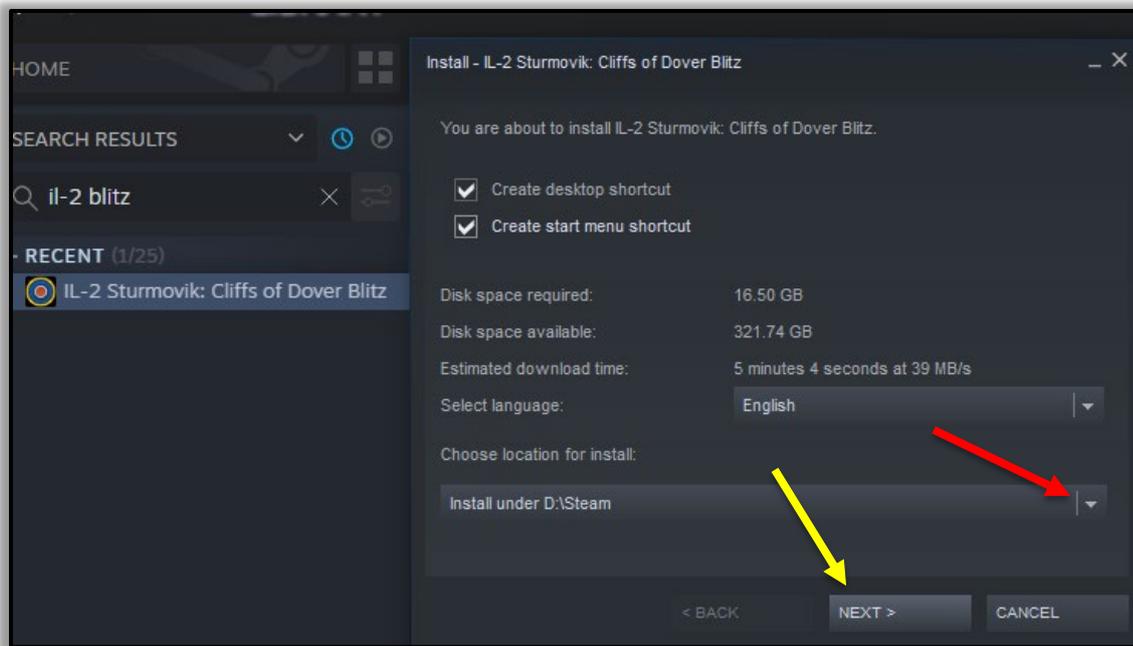


Take a quick moment to decide where you want **IL-2 Sturmovik: Cliffs of Dover Blitz** to be installed on your PC.

Steam will install **IL-2 Sturmovik: Cliffs of Dover Blitz** by clicking NEXT, provided you have sufficient disk space available (see yellow arrow).

Otherwise, you can browse to an alternative disk with more room; or to an SSD drive for quick game loading (see red arrow to browse to desired drive).

Once you have selected which hard drive to install to, click on NEXT (yellow arrow).



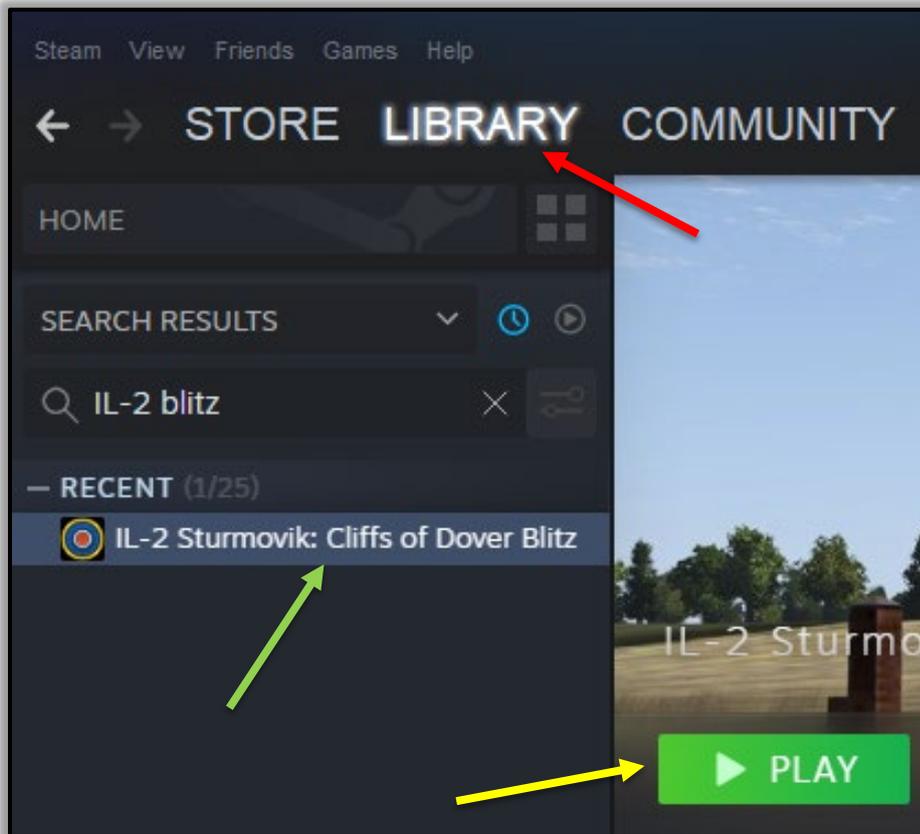
Once **Cliffs of Dover Blitz** is installed on your PC,

Launch Steam.

Go to Library (red arrow).

Select **IL-2 Sturmovik: Cliffs of Dover Blitz** from the left-hand column (green arrow).

Click on “Play” (yellow arrow).



Congratulations, **Cliffs of Dover Blitz** is now installed and you're ready to fly!

Or...are you?

Well, almost.

SETTING UP

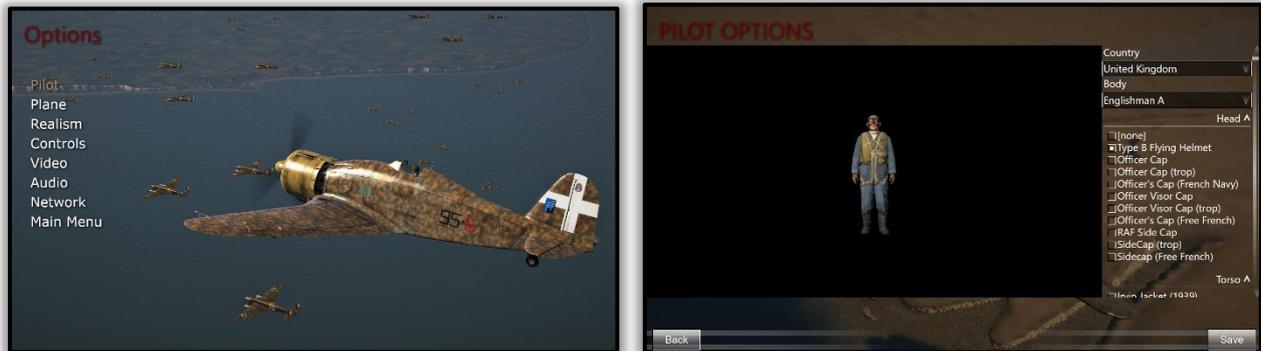
Once **Cliffs of Dover - Blitz** is installed on your Personal Computer, there are a few steps that need to be done to get properly set up to fly 'n fight! Upon launching you will see a loading screen such as the one below (the artwork may differ). It may take a minute for the sim to fully load onto your PC.



You will now be in the main screen (again, the artwork in the background may differ). You can check for the **Cliffs of Dover - Blitz** version that is on your PC (note the red arrow). You will also have six menu items to choose from: Single Player, Multiplayer, Options, Manuals, Extras and Exit.



Options – Pilot



Here you can choose from a number of uniforms and flying kit for your virtual pilot to wear.

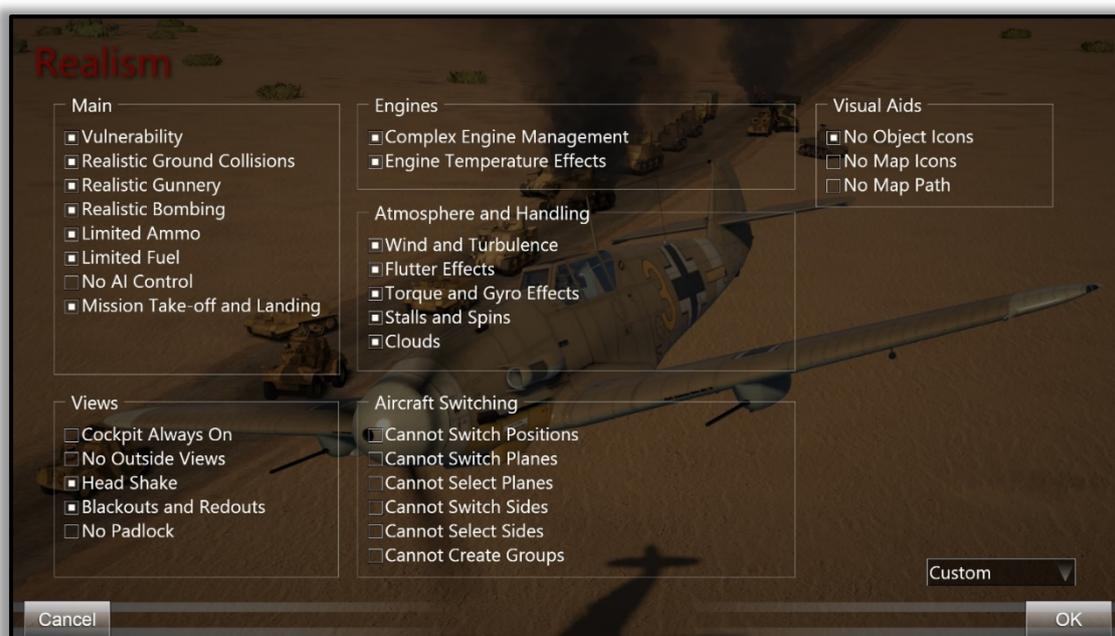
Options – Plane

Cliffs of Dover - Blitz provides the player historically accurate paint work and markings to choose from – even to the degree of weathering the aircraft will show as it progresses through the rigors of battle.



Options - Realism

If you are going to play as a Single Player then you decide just how ‘realistic’ or challenging you are going to set your gameplay. Most of the criteria are self-explanatory. For instance, under Engines you can choose Complex Engine Management where you, as the player, manipulate the various engine controls that the actual pilots did to get the maximum performance from your aircraft. Similarly, if Engine Temperature Effects is selected, your in-cockpit workload increases substantially as you monitor your radiator coolant and engine oil temperatures. You will find, as did the real pilots, that you must adjust your engine settings (i.e. throttle (boost) and engine rpms (propeller pitch) and your flight actions (climb, level flight, descent/dive) to keep these critical temperatures and engine rpms within specification. If you are unwary (don’t forget your radiator setting(s)!) or ignore any excesses – your engine and/or air frame is likely to fail on you...usually at the worst possible time!



Obviously, if you opt not to select Engine Management or Temperature Effects your workload is eased substantially, allowing you to focus more on combat, navigation, and general flying itself.

One caveat: if you decide to take on the ultimate challenge and log into one of the “Full Switch” (i.e. “Full Realism”) servers, your Realism choices are made for you. Generally, this means that you are in your cockpit (no external views), no padlock views (can’t use it to locate a hard-to-see adversary), no icons (again, making it difficult to spot adversaries), and, of course, the full cockpit workload in managing your engine and flight controls and watching your engine rpms and temperatures. Mastering these skills is an enormously challenging yet a highly satisfying achievement giving you the closest experience of being a real WWII pilot as possible in a flight simulation.

Options - Controls

This is critically important as this determines your interaction with your aircraft itself.

Let's spend a bit of time on this, as this is the most-oft asked about part of the game's set-up.



IL-2 Sturmovik Cliffs of Dover is a highly accurate simulation of WWII Battle of Britain and Desert War aircraft, land vehicles, ships, and many relevant ground objects that were used by both Allies and Axis forces during July 1940 to June 1942 time period. The aircraft featured in **Cliffs of Dover Blitz** and **Desert Wings - Tobruk** were complex machinery in their day. In order to jump into the cockpit of any of these advanced WWII fighters and head out into the wild blue to shoot down your opponents, you'll first need to do a bit of setup of your equipment on hand (joystick, keyboard, mouse). Once you've learned the cockpit drill on how to start up your chosen aircraft, the challenge ahead lies in how to fly this high-performance fighter to its maximum potential – without wrecking the engine or spinning out into the desert sand!

First off, let's say that you have a joystick but no head tracking device, throttle quadrants, rudder pedals, etc. etc. (commonly expressed as 'peripherals'). Do not despair. A number of our highest scoring virtual aces don't have these fancy peripherals either – yet they do extremely well knocking down 'better-equipped' opponents in a very hostile online environment and have a ton of fun as well. Along with that joystick, you'll need your keyboard and a mouse – and you're good to go.

Power Management of your USB ports

A small step towards preventing your Personal Computer from automatically cutting power to your USB ports can save a lot of inconvenience later. If the USB port that your joystick is connected to loses power, there is a likelihood that you will lose the programming that you assigned to your joystick. Fortunately, a once-only procedure can prevent this.

Right click on the Windows Start button at the lower left of your screen.

Left click on Device Manager.

In the Device Manager pop up window, scroll down to Universal Serial Bus controllers.

In the drop-down menu right click on the first USB Hub (Generic USB Hub; USB Root Hub; USB Root Hub (USB 3.0)).

In the drop box that appears, left click on Properties.

In the USB Hub Properties pop up box that appears, click on the Power Management tab.

Make sure that the box is un-checked for “Allow the computer to turn off this device to save power”.

Click on OK.

Repeat steps 4 – 8 for each USB Hub entry.

Close the Device Manager pop up box.

Calibrating your joystick

Another one-time procedure in Windows 10 to ensure your joystick axes are properly calibrated should be done at this point prior to assigning your controls. The procedure is very straightforward:

Note to Thrustmaster joystick users: To quote TM support... “The HOTAS Warthog (or any of our joysticks, wheels, pedal sets) should never be calibrated using the Windows Game Controller app, as this calibration overlaps with the Warthog's own calibration, and the calibration that can be done with our own calibration software. The Warthog rarely needs an external calibration tool and, when it does, we indeed ask you to please contact us to get the correct tool, that is adapted to your needs.”

Contact Thrustmaster support at support@thrustmaster.com

In the Windows Search box in the lower left of your screen, type Control Panel.

Left click on Control Panel in the pop-up window.

Left click on Devices and Printers.

Look in the Devices section for your joystick.

Right click on the joystick icon, and select Game controller settings.

In the Game Controllers pop up window, select your joystick listed and click on Properties.

In the Joystick properties pop up window, select the Settings tab.

Click on Calibrate.

At the bottom of the Welcome to the Device Calibration Wizard pop up window, click on Next.

Follow the series of directions and click on Next upon completing each direction.

Click on Finish.

Click on Apply.

Click on OK.

You've calibrated your joystick!

One prime bit of advice for **IL-2 Sturmovik Cliffs of Dover Blitz** is to pick an aircraft and learn it well. There is the natural temptation to initially try 'em all, which is fine with one caveat: what works in one aircraft won't necessarily work in another. Remember, they all had different origins and manufacturers – mechanically components operate differently from one aircraft to another. A good example are the brakes in RAF fighters vs. those in Luftwaffe fighters – enough to cause you to crash just taxiing to the runway if you're not aware! Other, more critical differences exist between the various aircraft.

To get started, we've selected two opposing aircraft that saw a lot of action in North Africa in '41-'42: The Hurricane Mk II and the Messerschmitt Bf 109 E-7. They were worthy opponents, yet mechanically and in flight were very much different from the other. To get set up for either in your 'virtual cockpit' at home three important criteria should first be considered:

[View System](#), [Flight Systems](#), and [Weapon Systems](#).

View system

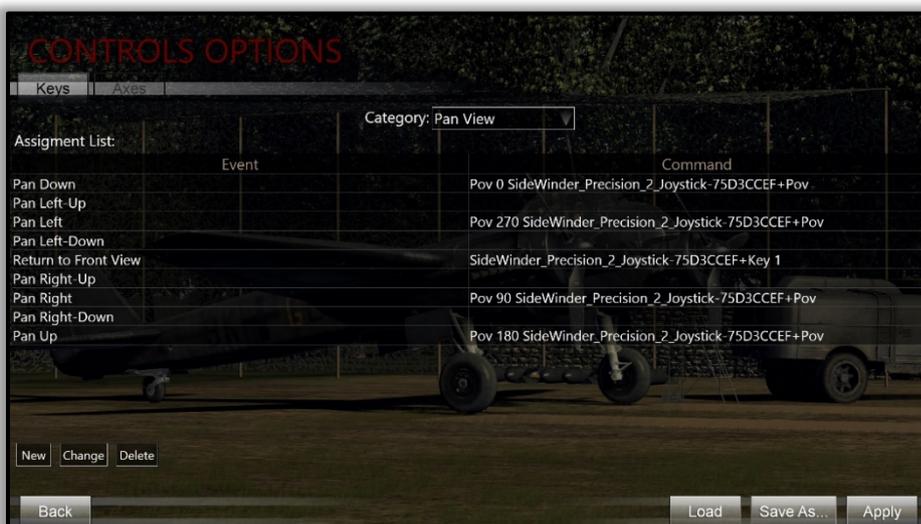
“Lose sight = lose fight”. Critically important to set up a means to scan the skies around you to search for targets, avoid getting “bounced” by the enemy, and simply to fly and navigate.

For decades sim pilots have successfully used the common hat switch located atop most joysticks. And they still do! There are various head tracker units available now at various price points (ED Tracker, TrackIR, etc.) which work fantastically well and certainly add to the immersion, but they are not mandatory to do well in this simulation. With practice, a well set up hat switch can be very effective at helping you maintain Situational Awareness. Here’s an example of setting up Pan Views on your joystick hat switch, accompanied by the default keyboard setup that comes with the game:

Default Pan View keyboard setup



Pan View programmed to joystick hat switch



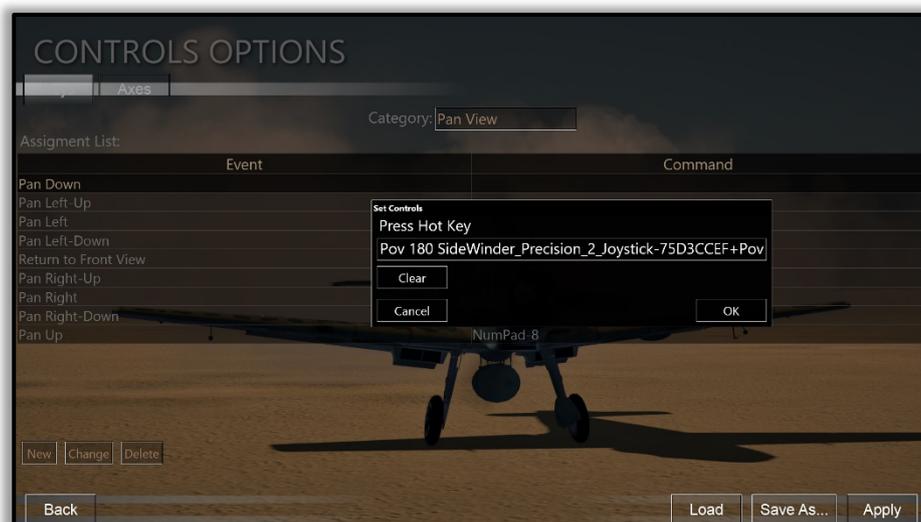
What was done above means that instead of having to use your left hand on the NumPad of your keyboard to look around (while your right hand is on your joystick actually flying your aircraft), you can use the handy hat switch on top of your joystick to look around. This frees up your left hand for other tasks, and using a hat switch is more natural and intuitive with a bit of practice.

Here is how all keyboard programming is done. It's incredibly easy in this sim! To get to the Controls Options simply start in the Main game screen, go to Options, then Controls. Select the Keys tab, then choose the Category – Pan View.

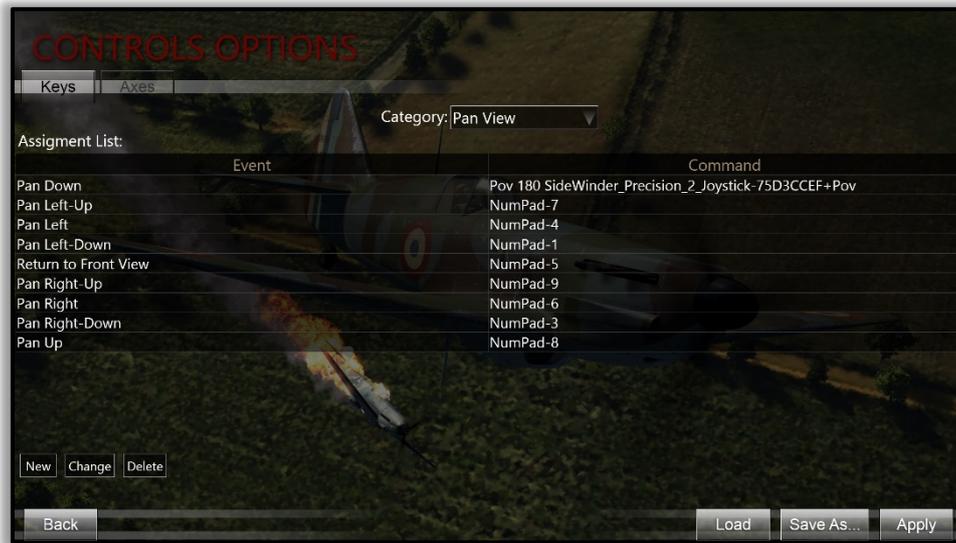
Place your mouse cursor over the keyboard command you wish to change and double click. In this case, let's change the first Pan View – “Pan Down” from the default NumPad-2 to the joystick hat switch.



In this case, the lower most hat switch position (= “POV 180”) is chosen. On your joystick, simply push the hat switch downwards into the POV=180 position. This will then be entered into the pop-up box that appeared in step 1.

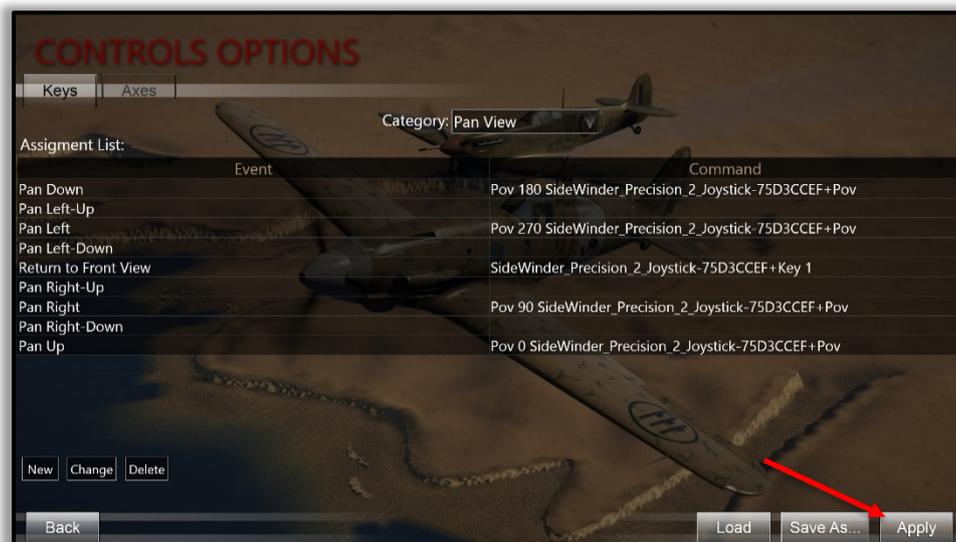


Click OK in the pop-up box and your new setting for Pan Down is now showing the POV 180 position on your hat switch!



Just do the same steps for the other joystick hat switch positions: POV 0, 90, and 270. A handy button on top of the joystick (located right beside the hat switch) was programmed for Return to Front View. This is very important to quickly return to looking forward after looking back behind each shoulder! Any remaining views not wanted for the hat switch can be deleted altogether.

And, here it is:



Now you need to hit “**Apply**” and you’re set – you can look around as you fly. With practice, you can also use the hat switch to track a manoeuvring opponent as you get into firing position!

Note: this is something you can play around with to set up to your preferences. There is also Quick Views to consider instead of Pan Views (the view “quick” quickly into position as opposed to smoothly “panning” into position). When using “BACK” ***nothing*** will be saved, remember to always hit Apply.

For the 5.030 patch new snap/quick zoom options have been added which led to a new original zoom management.

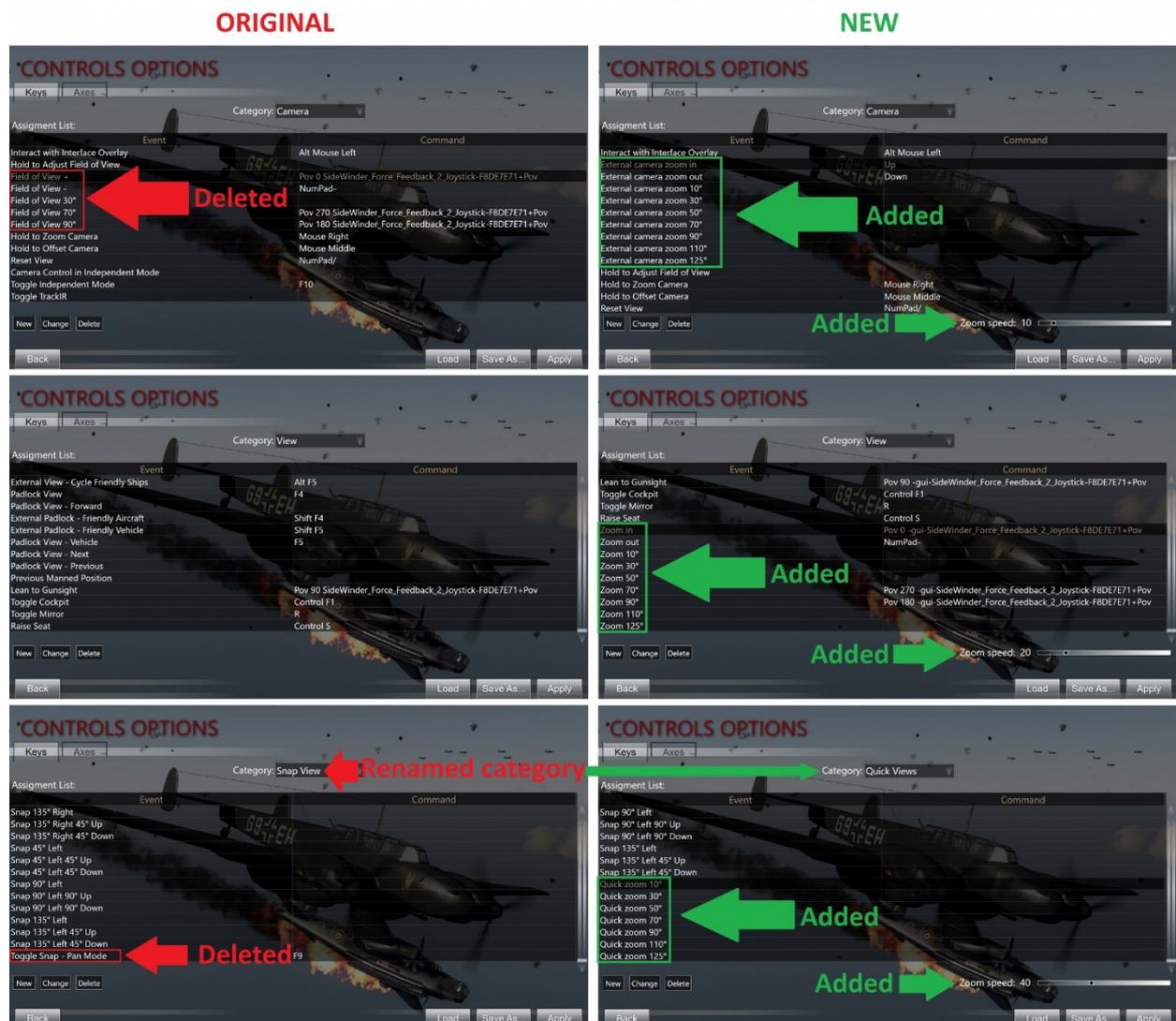
1. Zoom options are now spread in three different controls categories:

- "Camera" category contain controls for FOV (zoom) in external view.
- "View" category contain controls for FOV in cockpit view.
- "Snap View" category (renamed "Quick views") contain controls for quick FOV changes (zoom in when button is held/zoom out when button is release) in cockpit view.

2. Four new FOV steps has been added in each category (10°, 50°, 110° and 125°).

3. A new "Zoom speed" cursor has been added in each category allowing to set zoom speed (setting can be different between categories).

4. "Toggle Snap - Pan Mode" hotkey (F9) has been deleted allowing to pan or snap without pan/snap mode change.



Now ... let's get set up to fly!

Flight Systems

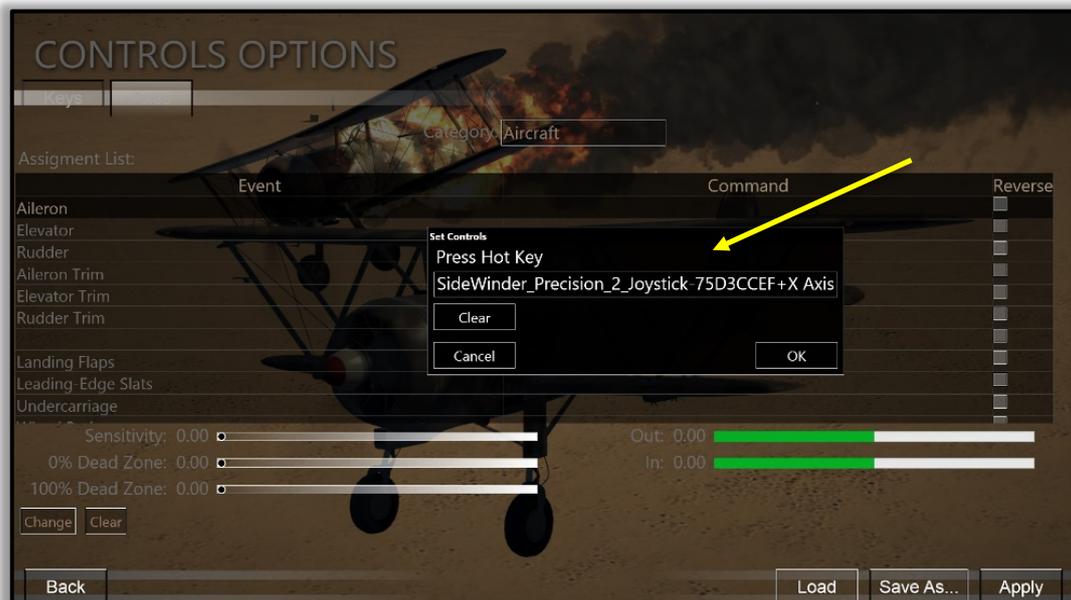
How to fly your aircraft with flight controls, engine controls, other important mechanicals such as landing gear, brakes, compass, etc. etc. etc.

The first thing to set up are the flight controls – namely roll (aileron control), pitch (elevator control), and yaw (rudder control). This takes you to the Axes Tab (vs. the Keys Tab used to set up Pan Views).

Again, from the Main screen, go to Options, then Controls, Category – Aircraft, then the Axes tab (instead of the Keys tab). The first control to be assigned to your joystick is Aileron (see yellow arrow) to control the aircraft's roll. Double click in the Aileron Command box.



As with Pan Views earlier, a Set Controls pop up box will appear. Move your joystick to the left and right (i.e. the X axis). Your joystick X Axis will now appear in the pop-up box (see yellow arrow).



Click on OK and your X axis is now assigned to your joystick. Moving your joystick to the left or right will now cause your aircraft to roll.



Repeat steps 1 through 3 to assign elevator control (Y axis – this time move your joystick forward and backward).

Repeat steps 1 through 3 again to assign your rudder control (Z axis – this time twist your joystick left then right).

Your Axes control set up should now look something like this:



Many joysticks have a fourth axis control usually assigned to the throttle. Scroll down the Controls Option page to Throttle control, repeat steps 1 through 3 one more time (moving the throttle lever on the joystick back and forth to assign this control to the throttle):

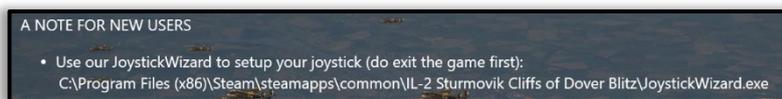
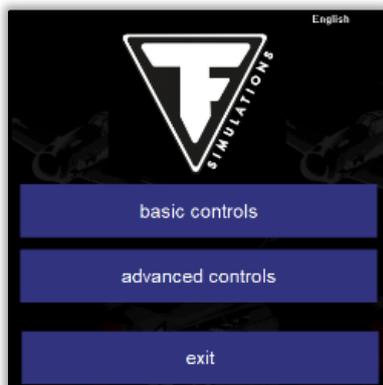


Now you need to hit “**Apply**” and you will have your Axes assigned (ailerons, elevator, rudder, and throttle), there are further basic flight, engine management, and weaponry that must be assigned keyboard keys or joystick buttons. Listed are some suggested keystrokes to assign for each function, but any of these can be assigned to joystick buttons if you prefer.

Joystick Wizard

For those new to a flight simulator TFS has provided you with a Joystick Wizard that you can use to set up your joystick.

To use this program, you will need to exit IL-2 Sturmovik Cliffs of Dover Blitz, head over to where your game has been installed (*when the game launches you can see where it can be found*), and launch the “JoystickWizard” .exe.



Weapons Systems

The whole reason you're here! Pre-flight setting up your ammo belts, convergences, your gunsight, then the actual shooting your guns and cannon itself!

The Weapons Systems can be modified, which is fully described in the Multiplayer section.

Suggested key assignments

General Dropdown Menu

Bail Out	Ctrl + E	Toggle Canopy (Open & Closed)	C
Jettison Canopy	J	Toggle Gunsight Illumination	T
Map	M		

Below you can find a few examples.

HURRICANE AND SPITFIRE



MESSERSCHMITT 109



Both HURRICANE/SPITFIRE and MESSERSCHMITT 109



Aircraft Dropdown Menu

Trim Elevator Nose-Up	Shift Up Arrow
Trim Elevator Nose-Down	Shift Down Arrow
Trim Rudder Right	Shift Right Arrow
Trim Rudder Left	Shift Left Arrow
Toggle Landing Flaps	F
Lower Landing Flaps Position	Down Arrow
Raise Landing Flap Position	Up Arrow
Toggle Undercarriage	G
Full Wheel Brakes	B
Full Left Wheel Brake	Left Arrow
Full Right Wheel Brake	Right Arrow
Fire Guns (Machine Guns + Cannon)	Joystick trigger
Start Selected Engine	i
Close Radiator	Page Down
Open Radiator	Page Up
Close Oil Radiator (Bf109)	Insert
Open Oil Radiator (Bf109)	Delete
Boost Cut-Out Override	Home
Toggle War Emergency Power	Backspace
Decrease Propellor Pitch	Comma
Increase Propellor Pitch	Period >
Toggle Propellor Pitch Automation	Slash (i.e. / key)
Fuel Cock #1 Toggle	Shift C
Magneto 1 Toggle	Z

Magneto 2 Toggle	X
Chocks	Y

Optional keys to program

View Dropdown Menu

External View	(For use on servers with external views)
Inside View	(For use on servers with external views)
External Padlock – Enemy Aircraft	(For use on servers with external views)
External Padlock – Friendly Aircraft	(For use on servers with external views)
External View – Cycle Enemy Aircraft	(For use on servers with external views)
External View – Cycle Friendly Aircraft	(For use on servers with external views)
Lean to Gunsight	(Zoom)

Camera Dropdown Menu

Field of View 30	(Zoom View – Spit and Hurri)
Field of View 90	(Return to Default View from Zoom View)

Pan Views and Snap Views (These are dictated by the Hat switch on your Joystick or TrackIR if you have it)

Chat Dropdown Menu

Toggle Net Stats	(*For Online Gaming only)
------------------	---------------------------

Remember to always hit “**Apply**” or your settings will not be saved.

Options – Video



How you set up your Video Options is dependent on the power of your computer (processing speed, RAM memory, video card model). Basically, it's a balance of appearance (resolution, detail level) versus smoothness (frame rate in game, no stuttering under load). One key point is to match the Resolution you set in the Video Options menu to the actual resolution of your monitor to get the best results. Anti Aliasing set to 0 helps contact spotting. Note that the Building Detail have the highest impact on FPS while making the least difference graphicly (eye-candy) when flying. Feel free to play with the many detail levels available to you. A good test is to fly low over a populated center like Tobruk or Derna to check for smoothness of frame rate, or pick a mission which has a lot of action – i.e. lots of aircraft, AAA flak, ground vehicles, etc. Let your eyes be your guide.

Options - Audio

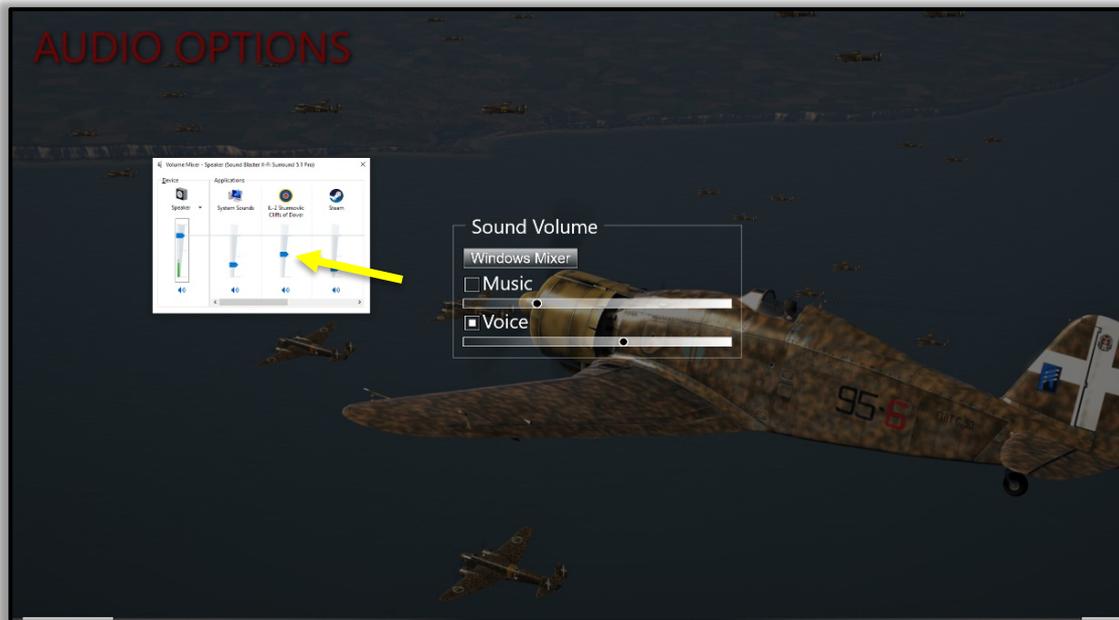


This is very straightforward to set up. The Audio options selections actually takes you directly to Windows 10 Volume Mixer without leaving the sim itself.



Simply click on “Windows Mixer” and you will have the Windows 10 Volume Mixer pop up.

Look for the IL-2 Sturmovik Cliffs of Dover sound slider and adjust the sound to its desired volume level. You can even do this as you are playing the sim itself by following these steps:



In game click on P (for Pause) to freeze the action while you make your sound adjustments.

Click on ESC (Escape) to temporarily leave the game action to get to the Audio options.

Click on Options.

Click on Audio.

Click on Sound Volume/Windows Mixer.

Make your sound adjustment on the IL-2 Sturmovik Cliffs of Dover volume slider.

Click on Back.

Click on Fly.

Click on P to un-Pause the game and resume your active flying.

NOTE: If you are flying in Multiplayer on an online server, you don't have the luxury of hitting the P (Pause) key to stop gameplay while you adjust your sound settings. In this case make sure you are in a stable situation such as parked on the ground, or in a well-trimmed level flight, before you decide to ESC from the active gameplay to go to Audio options. Otherwise, the sequence of steps for adjusting sound volume in Multiplayer is identical to those taken in Single Player.

The Music is the theme music heard outside of the sim itself, when you are navigating the various set up screens. The Voice is the radio voice of the ground controller and fellow virtual pilots.

Options - Network



These network settings are individualized to the player's internet/network system. The Custom Skins option allows you to see fellow network players' custom paint work on their aircraft, and for them to see yours. Frequently multiplayer servers have this option deselected to avoid loading stutters on their servers as new players spawn in with custom skins (paintwork).

Whew! That's it for the Options portion of the Main Screen.

Aircraft Manuals

At this point, you may be wondering “OK, I’ve got my axes, joystick buttons, and keyboard keys all set up. How do I fly this thing?”

This is where the hard work of Team Fusion Simulations Manual Creation Group pays off. For starters, this team have put together full colour “flashcards” of each aircraft’s cockpit with all the pertinent controls and instruments labelled, along with a checklist of Start Up, Taxi, and Take Off procedures, followed by detailed Landing procedures. Specs for engine management for each aircraft are also provided on the flashcard. Here is an example:



20201011

DESERT WINGS TOBRUK

Messerschmitt Bf 109 F-4 variants



Start up, taxi and take-off procedure

1. Apply chocks, set magnetos on M 1+2 (1)
2. Set fuel cock to 'On' (down position) (2)
3. Ensure that the propeller pitch (3) is at 12:00 o'clock (4)
4. Make sure the radiator switch is on automatic (5)
5. Open throttle to 10% (7)
6. Close air filter door (8) (trop version only)
7. Start engine by pressing 'i' (default)
8. Remove chocks and release breaks
9. Slowly increase power until aircraft starts to move
10. Steer by using rudder and toe-brakes
11. Ensure canopy is closed before attempting take off (9)
12. To take off smoothly increase throttle to 100%
13. Use light rudder inputs to steer
14. As speed increases pull control stick back slightly to prevent nose over
15. At approx. 180-185 km/h (10) take off, raise undercarriage (two stage) (11) and avoid climbing too steeply

Landing procedure

16. Close air filter door (8) (trop version only)
17. Lower flaps on approach at 250 km/h (12)
18. Lower landing gear (two stage) at 250 km/h (13)
19. Touchdown speed 180 km/h
20. Use light rudder inputs to steer
21. After touchdown maintain slight back pressure on joystick until low speed to avoid nosing over
22. Steer by applying rudder and brakes carefully until stopped
23. Set fuel cock to 'Off' (up position) (2)



Engine Management

Recommended settings for:	Radiators	Throttle	ATA	RPM
Cruise	Auto.	90%	1.15	2300
Climb	Auto.	100%	1.30	2500
Highest speed	Auto.	100%	1.42	2700 (1 min)

Never exceed 115°C water and 85°C oil temperature



These flashcards can be found in the Main Menu > Manuals > aircraft.

Further to these very handy flashcards the TFS Manual Creation Group have created detailed Flight Manuals for each of the many flyable aircraft in **Cliffs of Dover Blitz** and **Desert Wings - Tobruk**, in a number of language translations.

SINGLE PLAYER



This is the most popular aspect of **Cliffs of Dover Blitz**. When you select Single Player, you are given the choice of Training, Quick Mission, Single Mission, Campaign, or go back to the Main Menu.



Training

You're placed in a Tiger Moth trainer and put through a series of flight exercises, with the voice of your flight instructor in your ear:

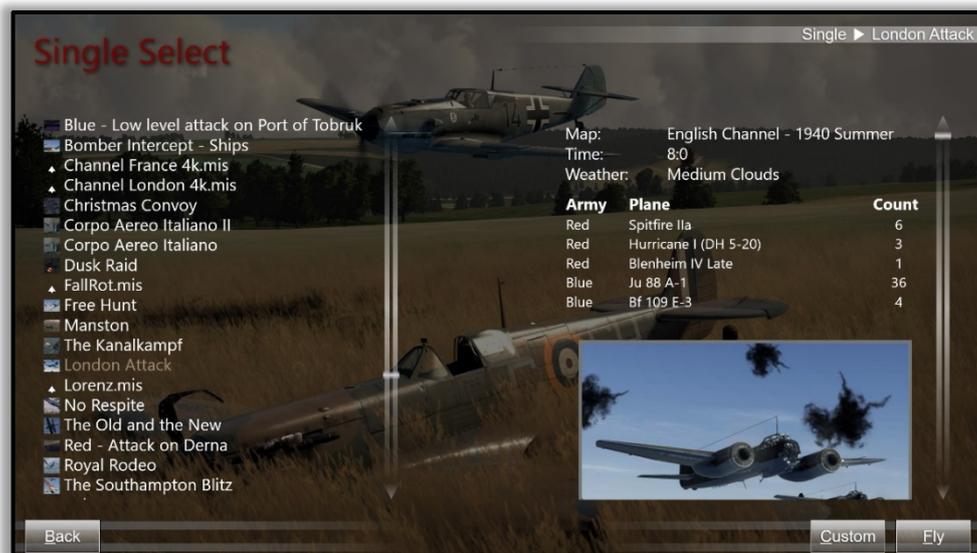


Quick Missions



Quick Missions give you the chance to jump directly into a cockpit of your chosen aircraft and fly a variety of already-constructed missions. The missions themselves are already created, but you as the single player can choose your aircraft, the opposing aircraft, plus time of day, weather, and even the altitude of any clouds. You can change the Realism options to suit your thirst for challenge, and even save your choices for future play. These are extremely popular for quick practice to polish up your flying skills, gunnery, and air combat manoeuvres. And ... they're great fun!

Single Missions



Single missions are custom missions that you can create yourself in the Full Mission Builder (more on that later) or download from other creative players who are willing to share their mission masterpieces. The mission .mis files themselves are very small and easy to share. They add a whole new dimension to this sim, with all kinds of awesome scenarios based either on historical events or just hypothetical missions for added interest and fun.

Campaigns



As the name implies, you adopt a pilot persona involving different historical scenarios/sides/aircraft and follow a series of interlinked missions on your tour of operations. Very absorbing and immersive. And again, great fun!

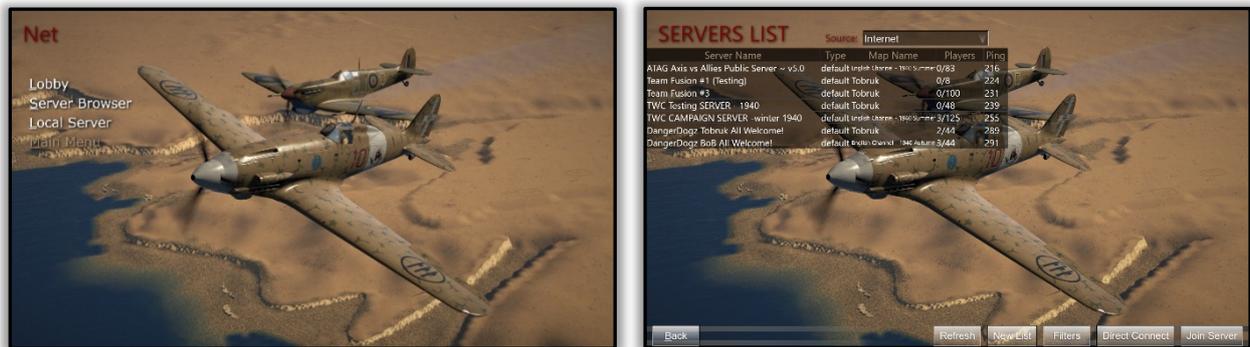
Next: the ultimate challenge! **IL-2 Sturmovik Cliffs of Dover Blitz** has an extremely powerful feature which it does very, very well...

MULTIPLAYER

This is the ultimate test of a player's acquired skills on his chosen aircraft: human opponents. As good as the Artificial Intelligence is of **IL-2 Sturmovik Cliffs of Dover Blitz's** virtual pilots, there is no comparison to the human adversary. When you come up against your first human opponent, your heart will be pounding and your breathing will accelerate. There is no denying the thrill of vanquishing a human opponent in a one-on-one dogfight, be it your first victory or your 100th. Wins don't come easy here.

Logging into a server

To get started, go into the Multiplayer menu screen and click on Server Browser. You will get a list of active servers. Most are open access (no password required) and all are free of charge! In the Servers List check out the servers under Server Name and left click on the desired server you wish to join. This will highlight your chosen server. In the bottom right corner, click on Join Server.



A loading screen will appear, with a progress bar at the bottom showing your progress towards joining the server. Depending on the speed of your internet connection, and how busy the server is, this joining process may only take a few seconds or possibly a minute or two. If it takes too long, you'll get pop up message saying you've "timed out". You can then repeat the joining procedure in a second attempt, or opt to choose another server to join.



Choosing a side

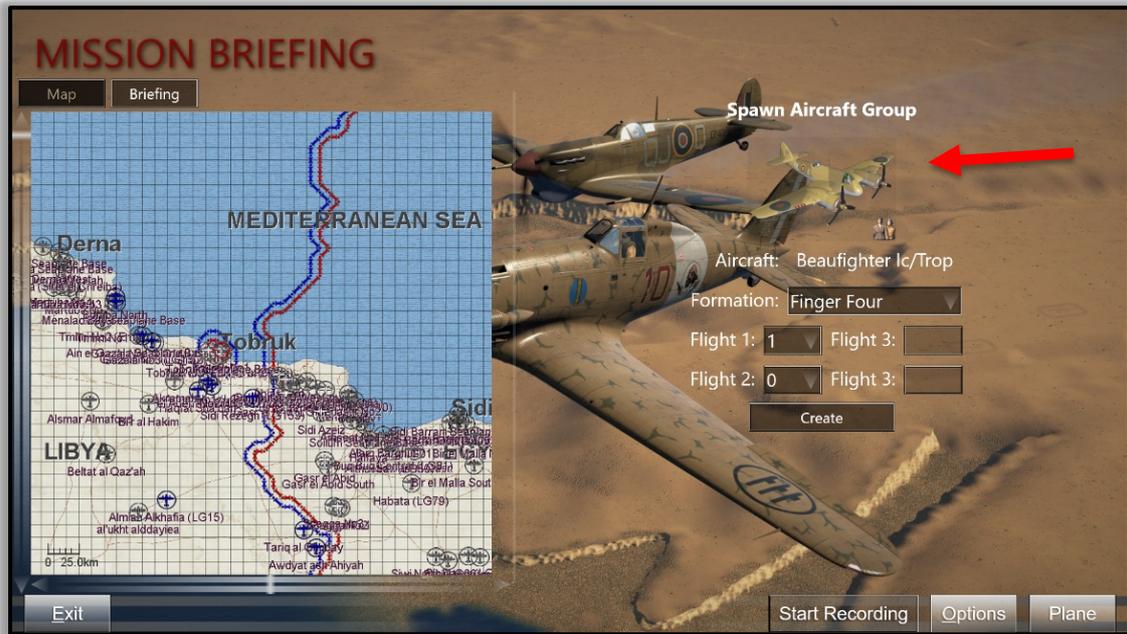
Once you have successfully logged/joined into a server, you will be presented with a Client Briefing Page. The first thing you must do is decide which side you will fly for. This is done by clicking on the small flag of your choosing – see the red arrows, click on one of them.



In the screen shot below the British (RAF) flag was chosen (note the red arrow). Two things happen:

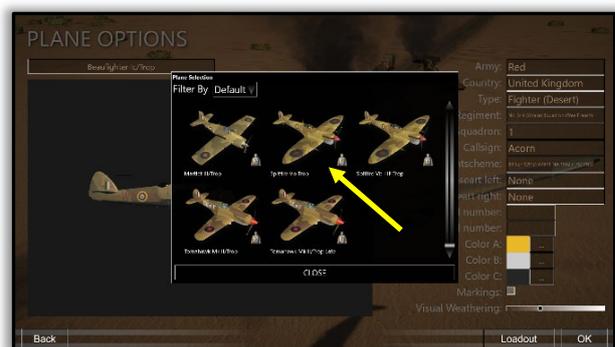
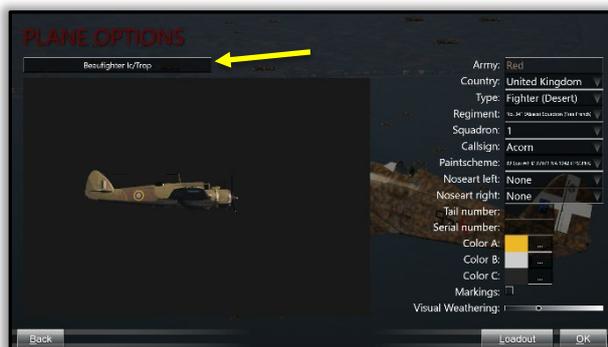
The Mission Briefing (on the left over the map) becomes available – it's strongly advisable to click on briefing and read the briefing notes.





Choosing an aircraft

Here's the good news: if you double-click on the picture of the Beaufighter you will pull up a selection of the available aircraft at this airfield which you can choose to fly! You will get a screen like on the left below. Click on the aircraft label (note the yellow arrow pointing to Beaufighter Ic Trop). You will then see all the aircraft available to fly at this particular airfield, per the screen on the right. Again, note the yellow arrow pointing to the selected aircraft, the Spitfire Vb Trop.



Customizing your aircraft

Squadron markings

You can customize your chosen aircraft to a large degree, starting with its squadron markings, paint schemes, degree of Visual Weathering (i.e. wear and tear), etc.



Plane loadouts

Next, click on the loadout button (see yellow arrow in screen above) to decide on your fuel load (red arrow). Next, click on the “Guns” tab to customize your guns and (where applicable) your cannon loadout.



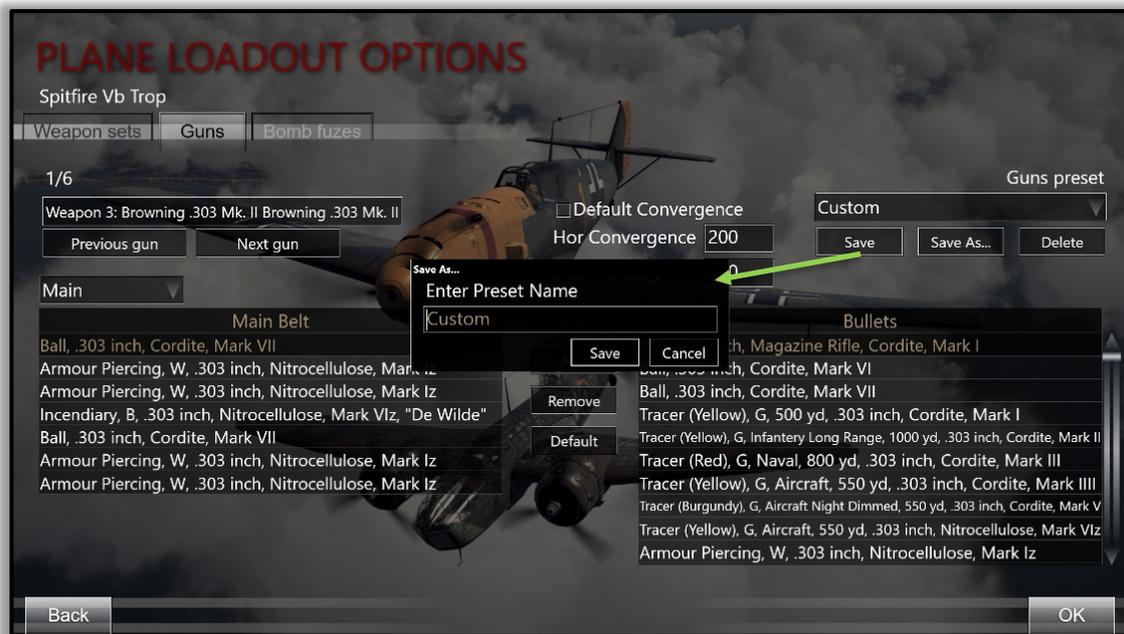
Upon clicking the “Guns” tab, the various coloured arrows show the enormous amount of customizing that can be done for an aircraft’s ordnance.

Blue arrows = Each gun/cannon can be individually selected for a customized ammo belt.

Yellow arrows = the many types of ordnance available to load in each ammo belt.

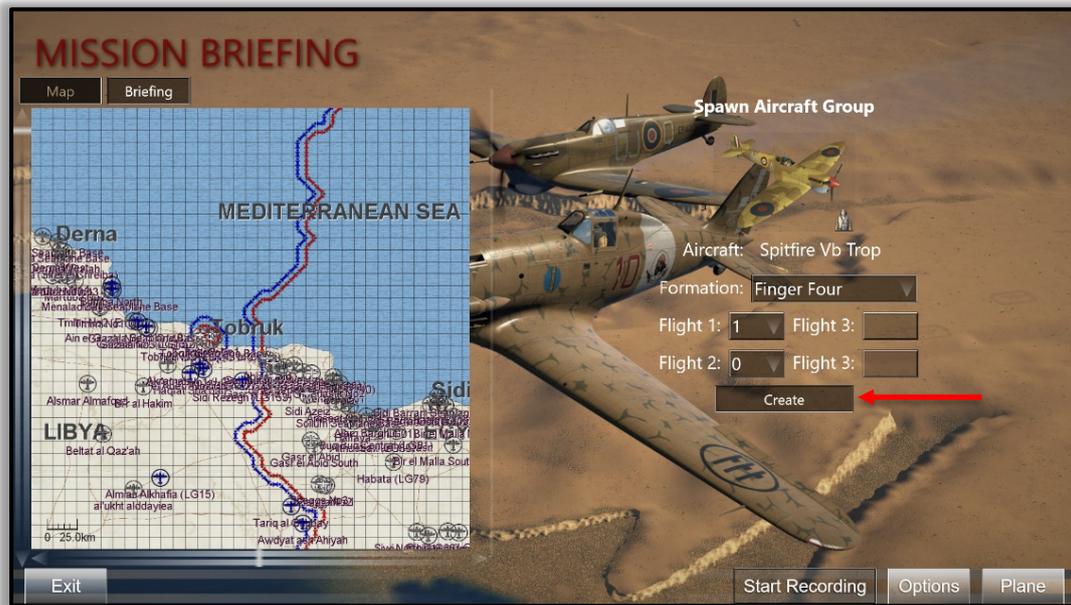
Red arrow = gun/cannon convergence for each gun that can be set.

Green arrow = ability to Save As each customized ammo loadout as shown in the two successive screens.



Spawning in

Upon clicking on OK in the Plane Loadout Options screen, you will be returned to the Plane Options screen. Click OK and return to the Mission Briefing screen. Click on “Create” (red arrow) and you will spawn into the server map at the airfield you had selected earlier in your selected aircraft.



You have now transported yourself back to 1941/42 and are seated in one of the hottest fighter combat aircraft of the North African theatre. Adjust your controls, start up, and taxi to the runway. You are about to fulfil your virtual destiny!

Spawning out

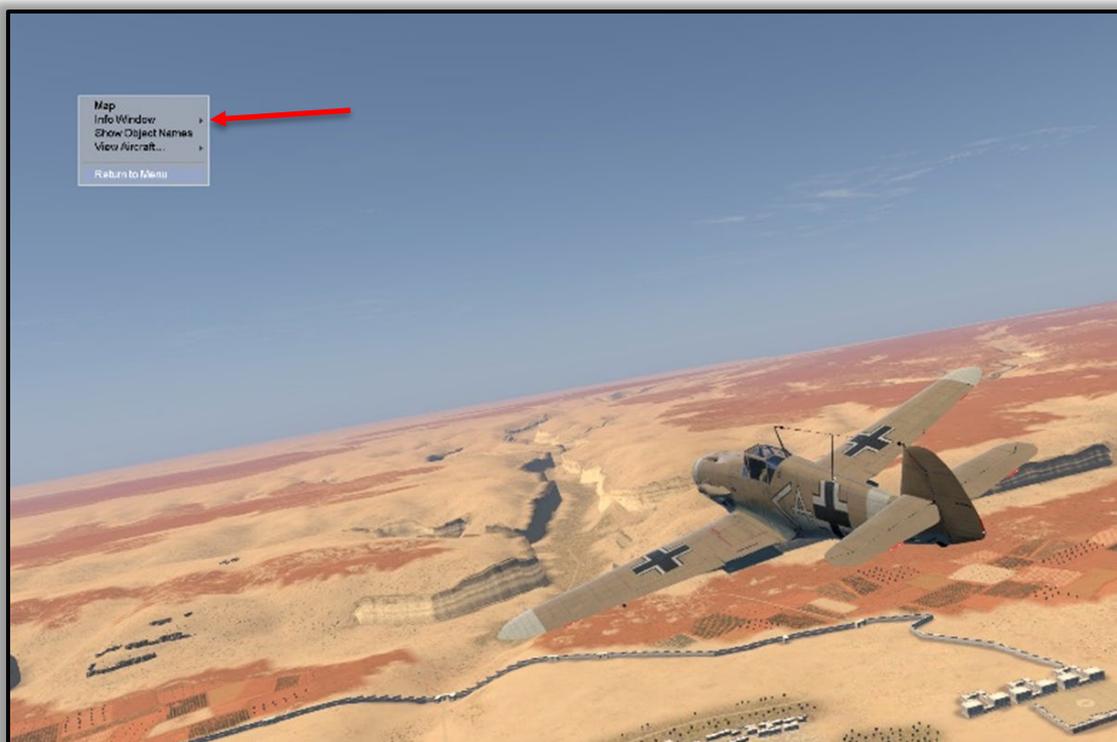
Once you have safely landed your aircraft (or crash landed successfully) and wish to leave the server simply hit ESC and on your faction flag, you will be then prompted if you wish to leave your aircraft. Click on YES and you will be returned to the Client Briefing Room where you can either choose to respawn in a new aircraft of your choosing (or even change sides if you wish!) or leave the server to end your gameplay.

Information Windows

Some players opt to fly with a “clean” screen, i.e. no game information/text showing on the screen at all which they find distracting and/or interfering with their flight immersion. Others prefer to have some (or a lot!) of information visible to them which is readily available by way of “information windows”. Examples would be in game chat messages with fellow players (on multiplayer servers), text renditions of ground controller messages (single or multiplayer), engine parameters such as % throttle or % pitch etc., even sustained damage to your aircraft!

Setting up information windows is easy and can be readily tailored and positioned to your preference. The steps to creating and modifying information windows are straightforward:

To create an Information Window simply left click anywhere on your screen, then right click to bring up the following popup box on the left below. Next, click on Info Window (red arrow). Choose New Info Window. This will bring up a blank Info Window shown on the right below.

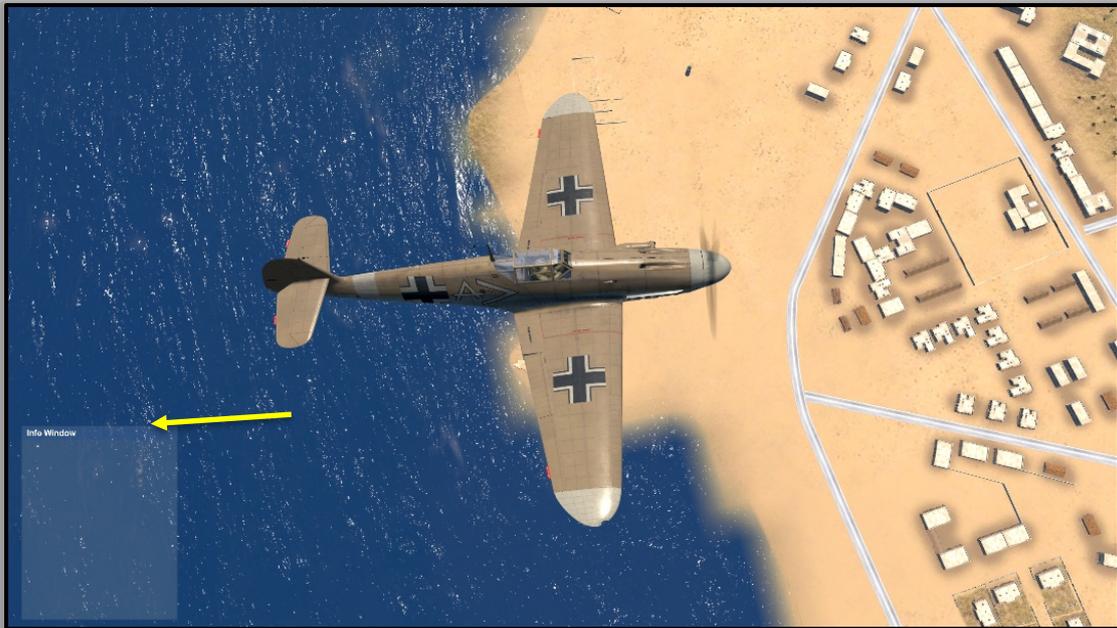




You can take the opportunity to place this new (blank) Info Window anywhere on the screen that you choose. Simply place your mouse cursor on the upper light blue border (right beside the Info Window title) of the blank Info Window.



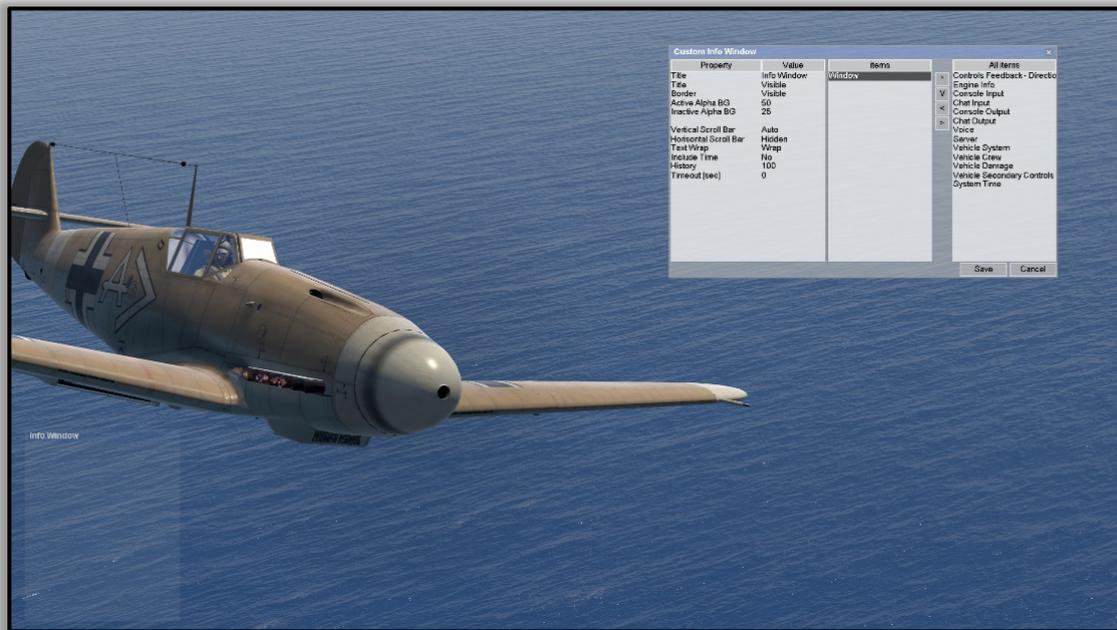
A small hand icon will replace the usual arrow mouse cursor. Holding down the left mouse button, drag the blank Info Window to wherever you wish it placed. In this case, the lower left corner of the screen (yellow arrow).



Once the blank Info Window is located in the desired spot, release the left mouse button, then move the mouse cursor down into the blank Info Window where the normal arrow-shaped mouse cursor will show. Right click and the following popup box will appear. Left click on Customize Info Window.



A new, quite detailed “Custom Info Window” (see below) will pop up which will offer a plethora of available in game information to you displayed – as you choose – on your monitor screen as you play.



The Custom Info Window is divided into three main parts:

Property (physical appearance of your customized Information Window)

Items (which you have selected from the “Items” box to the right)

All items (from which you select and move to the center “Items” box)

As an example of how to go about creating an Information Window, then moving and formatting it as desired, follow the steps listed below. Please note that you can create as many separate Information Windows as you wish, at the risk of cluttering up your screen with “too much info” and risking obstructing your field of view.

Objective: to create an Info Window showing the positioning of my engine controls (throttle, prop pitch, radiator(s) etc.). Next, I wish to resize the window smaller, move it to the bottom right hand corner of my screen, eliminate the distracting Info Windows border and background, and finally have the Info Windows actually fade out of view until such time as I touch a control. Whew! Big order! Let’s get started:

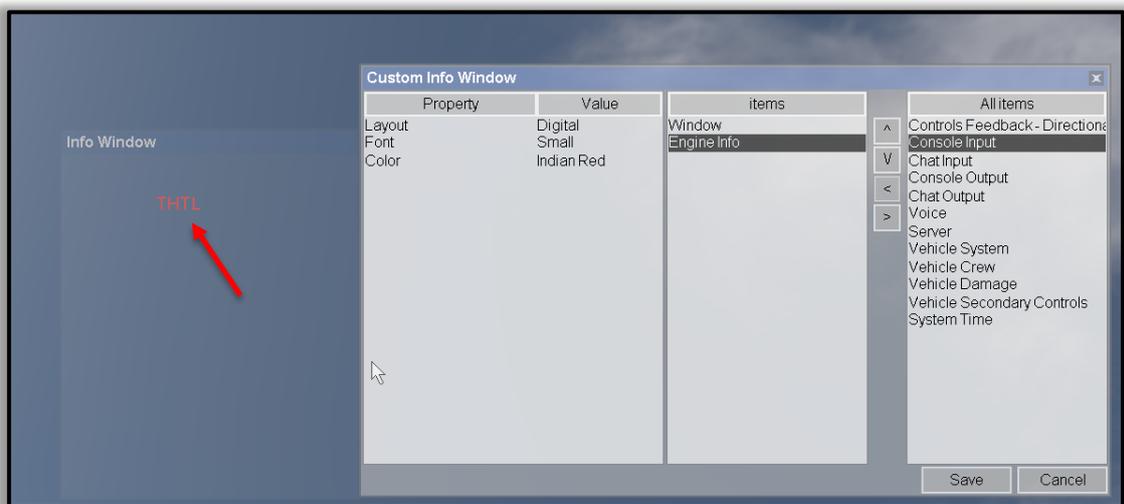
Following the steps earlier, bring up a Custom Info Window on your screen. If in Single Player press P on your keyboard to Pause the gameplay. If in multiplayer on a server, you very likely will not have Pause as an option, so be sure your aircraft is in a stable situation i.e. stationary on the ground or trimmed level flight. No point crashing your aircraft while constructing this Info Window!

From the All items list on the right, left click on Engine Info to select it (red arrow).

Click on the left pointing indicator (yellow arrow) to move your Engine Info selection to the middle items box.

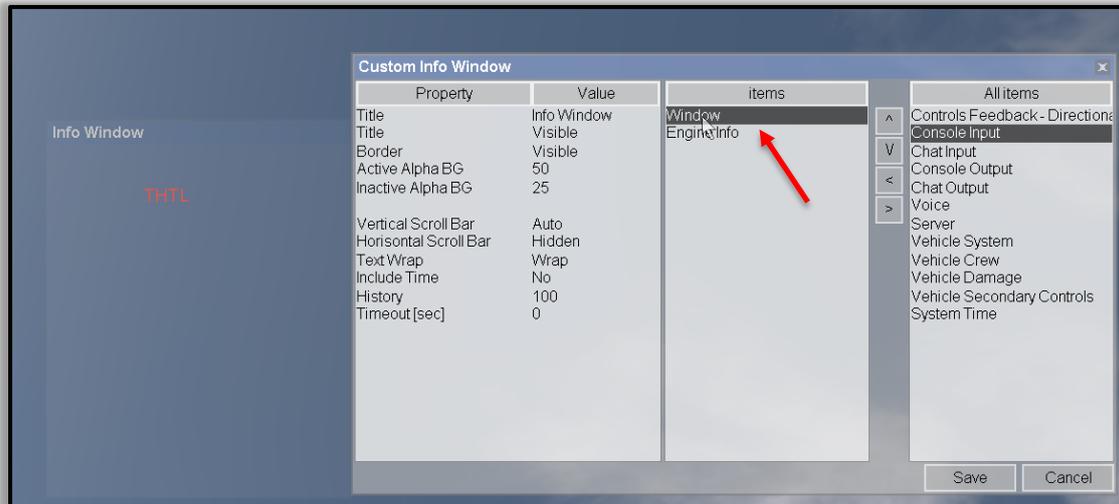


Your Custom Info Window should now look like this:



In the left box (Property) of the Custom Info Window you can, if you wish, tweak the Layout, Font, and Colour of the Engine Info display.

In the items middle box, click on “Window” which will bring up further adjustments in the left “Property” box which you can make to your Engine Info display.



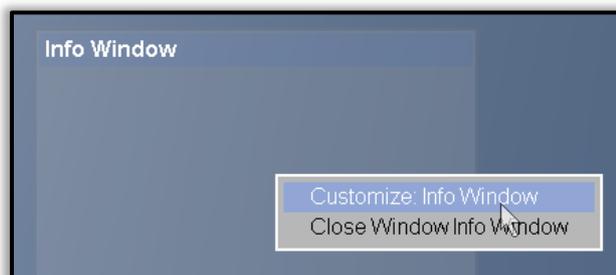
The bottom two selections, “History” and “Timeout” refer to how many lines of scrolling text is preserved in your Information Window (in the case of Chat conversations, for instance) and how long the information in the window stays visible. Many players prefer the displays to fade out after 30 seconds or so to clear the screen. Others select a Timeout of 0 seconds which means the display will remain visible continuously and not fade out at all.

You can now resize and finish positioning this Info Window box to your taste. Click on “Save” in the Custom Info Window box.

ALT – Left click on the new Info Window you have created. You can reposition it as before by bringing your mouse cursor up to the upper blue border (beside Info Window) and, holding the left mouse button down, drag the Info Window to where you wish it placed.

The Info Window box can be resized by placing the mouse cursor over the top, bottom, or sides of this box and dragging the sides in or out to enlarge or decrease the box size.

Finally, if you place the mouse cursor within the Info Window and right click, a pop-up box will appear that will prompt you to Customize the Info Window, bringing up the earlier Custom Info Window box again. Now you can, if you wish, have the borders, background and title disappear by selecting each to be Invisible with BG values of 0 and 0 respectively. Hit “Save” and your Info Window is completed!

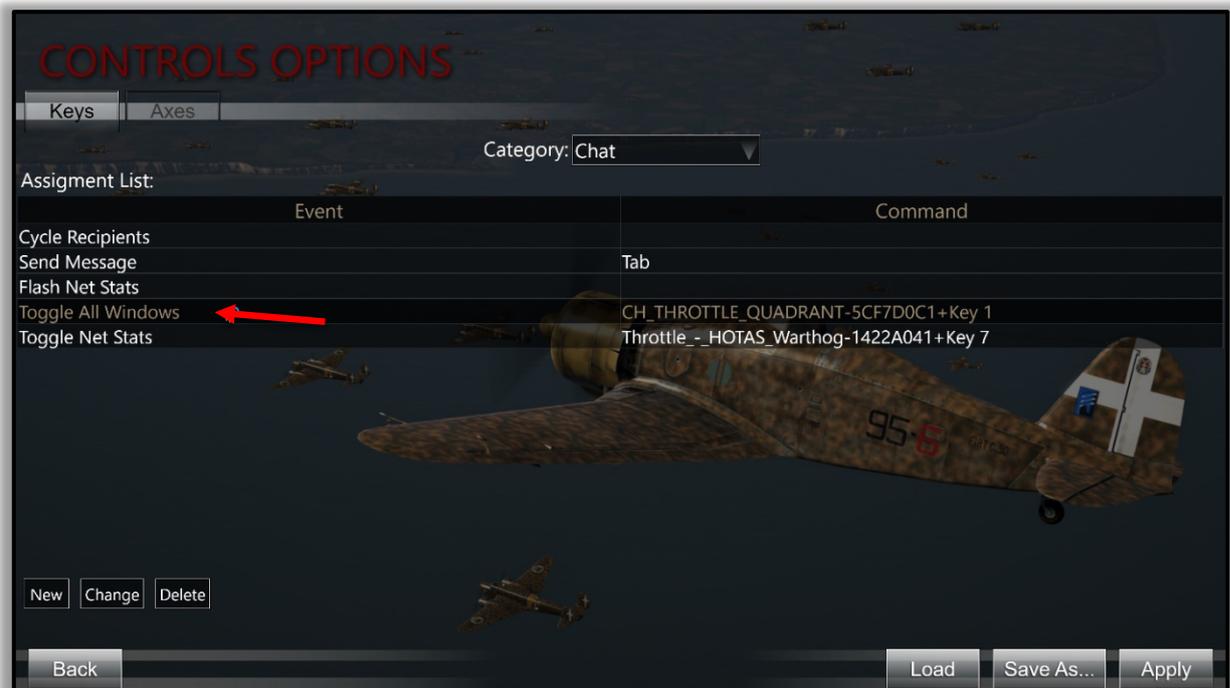


New option to toggle all in-game info windows on/off (Options, Control, Chat)

This will hide or show all the info windows that you have configured (also hide the Net Stats if shown).

Note 1: If you have used this to hide all windows and then use Send Message, Toggle Net Stats or Flash Net Stats, this will unhide all windows, too.

Note 2: The current status will be remembered until you exit the game, but not beyond.



TROUBLE SHOOTING

My joystick axis and key assignments have suddenly disappeared from my joystick profile!

As mentioned earlier about Windows 10 assigning specific identities to each joystick and peripheral, sometimes Windows 10 has the annoying habit of mixing the order of the USB controllers (i.e. joysticks, rudder pedals, etc.). This can happen during a major Windows 10 update, or even the simple act of turning off your PC and unplugging it. Even unplugging the USB cables of your joystick and other peripherals can cause the loss of the axis & joystick button assignments, especially if these are plugged back into different USB ports or in a different order. This can cause the joystick profiles you created to lose their axis and key assignments. Not the end of the world, but a real time waster since you have to go through the procedure of reassigning all your axis and keystrokes once again.

Invest in a powered USB hub

Not fool proof, but if the joystick and other peripheral USB plugs are left in the same hub ports, then it's very likely the axis/key assignments will not be altered. A further advantage to using a powered USB hub is that several of your PC USB ports are now freed up for other accessories.

JoyToKey

JoyToKey enables PC game controllers to emulate the keyboard and mouse input. Many Cliffs of Dover players have found this utility avoids the problem of Windows 10 re-identifying their control stick buttons, plus it gives added flexibility in assigning commands to your peripherals.

JoyToKey can be downloaded here: <https://joytokey.net/en/>

Use the “devreorder” utility

Another effective method to avoid USB peripheral reassignments by Windows 10 is to use the free utility called “devreorder”. This is a tool which allows you to change and *fix* the order in which **IL-2 Sturmovik Cliffs of Dover Blitz** “sees” game controllers. The link to this utility is here:

The direct download link is here: <https://github.com/briankendall/devreorder/releases>

The problem is that Windows randomly scrambles the order of your joysticks once in a while, but CloD setup requires keeping the same joystick associated with the same number. And Force Feedback goes only to ONE joystick-the first Force Feedback joystick it encounters in whatever order Windows presents them in.

And, here is Flug’s solution--in five easy steps:

1. Download devreorder here:
[devreorder download page](#)
2. Exit CloD & any other game/program that might be accessing joysticks. Copy the *dinput8.dll* file (X86 version) from the download .zip to:
SteamLibrary\steamapps\common\IL-2 Sturmovik Cliffs of Dover\parts\core
3. Copy the sample *devreorder.ini* file from the download.zip to:
SteamLibrary\steamapps\common\IL-2 Sturmovik Cliffs of Dover
(this is the same directory your Launcher.exe is located in.)
4. Edit *devreorder.ini* to list your existing joysticks in the order you wish to see them in CLOD. Instructions are found within the devreorder.ini file.
5. Relaunch **IL-2 Sturmovik Cliffs of Dover Blitz** and enjoy.

Note: The "Steam\steamapps\common\IL-2 Sturmovik Cliffs of Dover" means the directory where your Launcher64.exe file is located. This can be in different locations depending on where you have chosen to keep your Steam Library. The default location is usually something like

C:\Program Files (x86)\Steam\steamapps\common\IL-2 Sturmovik Cliffs of Dover Blitz

Can't Join a Multiplayer Server

Check the compatibility of the **IL-2 Sturmovik Cliffs of Dover Blitz** launcher64.exe.

Open *C:\Program Files (x86)\Steam\steamapps\common\IL-2 Sturmovik Cliffs of Dover Blitz*

Scroll down to Launcher64.exe.

Right click on Launcher64.exe.

In the drop down menu that appears, left click on the Properties tab.

In the window that pops up, left click on Compatibility.

Try the “Run compatibility troubleshooter” utility and follow its recommendations

or

under Compatibility Mode, click the little white box “Run this program in compatibility mode for:”

Left click in the long grey box to produce a dropdown menu showing earlier versions of Windows (Vista, Windows 7, 8). Select your version of Windows, or select Windows 7.

Click “Apply” in the bottom right corner.

Click “OK”.

Relaunch **IL-2 Sturmovik Cliffs of Dover Blitz** and retry joining a multiplayer server.

IL-2 Sturmovik Cliffs of Dover Blitz won't launch!

- 1) Disable any Sweetfx or Injectfx you have running
- 2) Remove dxg9.dll from your game folder
- 3) Try disabling any Printers you might have installed
- 4) Update your Graphics Drivers, and try lowering your in-game Graphics settings
- 5) Disable your Anti-Virus

Find the anti-virus in your task bar or windows task list and disable it. It will restore when you re-boot. Now we appreciate this isn't ideal but this is simple fault-finding. So, if CloD fails to run with your AV, go into your AV settings and add an exception to the root folder containing your CloD Steam install and also the 1C softclub folder in MyDocuments.

- 6) Run the Launcher in "administrator" mode

Place a shortcut to the launcher (from your game folder) on your desktop. When you want to run CloD, right-click the shortcut and select "run as administrator"

Screen freezes, stuttering or lag. Please try the following

Windows 7 users:

1. Click START ^ Control panel ^ Programs ^ Programs and Features. Go to Microsoft .NET Framework 4 Client Profile. double click on it, and repair it, After repair it will ask restart your computer, do it.
2. Then go to C:/Program Files (x86)/Steam/steamapps/common/IL-2 Sturmovik Cliffs of Dover Blitz/_CommonRedist/DirectX/Jun2010 Scroll down until you see DXSETUP. Double click on it, and run it!

Beige or grey square or rectangle on my screen

Hover your mouse over this square/rectangle.

Hold down the ALT key and left click on it.

Release the ALT key, then right click.

Left click on Close Window Info Window.

Zoom View feature

- 1) Go to the main Menu, Click "Option",
- 2) Click "Controls".
- 3) Left click on the drop-down menu,
- 4) Select "Camera Option"
- 5) Assign a keyboard key (or joystick button) to zoom in (POV +), and another to zoom out (POV -).

In a Campaign my aircraft won't move and noses over instead!

Brakes are on by default in the hurricane for the campaign missions. You just need to press wheel brakes button once to clear it.

To brake only left or right wheel, press "Full Wheel Brake" key and push the rudder for this side.

In SP missions/campaigns since you spawn with engines on, brakes are on too. Same in multiplayer.

"Full Left Wheel Brake" and "Full Right Wheel Brake" is for German planes. Italian planes also use "British" system.

Is there any chance of Oculus Rift Support?

Our tagline is "keeping the dream alive". There is a possibility that this feature will be added on in the future.

'Invisible' tracers?

Enemy aircraft can have invisible tracers i.e. 'tracerless' ammunition loadouts. The 20mm ammunition in the Luftwaffe really has a big impact against the enemy aircraft, but it can be tracerless so you'll only feel/see an impact. Most aircraft can tailor their ammunition belt/drum loadouts to omit tracer rounds.

My fighter airplane has no sights!

The gunsights in the British and German aircraft are only visible when switched on. They are a bit blinding in low light/night. Try switching them off just before you get to firing distance as they appear to take a little while to fade out which gives you a slightly easier reticle to see the target through.

Mouse will not activate in-cockpit controls.

1) If it's happening online, make sure that "mouse view" is not enabled. If it's on, you'll be able to look around by moving the mouse without holding down the middle mouse button, but you won't be able to use the clickable cockpit. The F10 key toggles it on and off.

OR

2) Go to the Main Menu > Controls > Aircraft > Keys and look for the following input: "Mouse Control" is usually assigned to "Mouse Left". If the Mouse Control key is currently blank you need to assign it.

OR

3) The mouse control one is blank ... but it will not let me enter anything in there ... including left click or any keys

Inside your Confuser.ini are all the key bindings you would set up normally in the control options menu. You can, though, manually assign keys in the confuser.ini for situations like this.

Go into your Confuser.ini and look for the line "[HotKey BOB]". The confuser.ini is located in your C:\Users\your username here\Documents\1C SoftClub\il-2 sturmovik cliffs of dover Look down that list of many controls and you should see a set of lines like this;

```
Joystick+Key12  
Joystick+Key16=autorudder_high  
Joystick+Key3=pitch_auto  
MouseLeft=MouseControl  
Underscore=thtl_minus  
Backspace=thtl_wep
```

If you are having an issue getting your mouse to be the 'mouse control' just copy and paste the line above (in Red) into your confuser.ini, where it is shown above.

How to fire guns in a turret position?

To fire the guns while in a turret position go to: Controls > General. This is usually defaulted to "Fire Current Weapon" = "Mouse Left". The default "Mouse Left" are assigned in Controls > Camera for "Hold to Offset Camera".

You need assign another key for this command or you are unable to move turret guns and fire at the same time.

Mirror doesn't work or no mirror at all!

This applies to all Hurricane and Spitfire models.

No mirror – easy fix!

Launch the sim, then go to Options → Controls → Keys tab → Category: View

In the View key assignments, scroll down to the bottom to “Toggle Mirror”. Assign a keyboard key or joystick button to that command. Remember to “Save As” this new addition to your flight controls configuration, then click on “Apply”. When you're back in game you simply have to hit the keyboard “M” key to toggle the mirror on and off.

Mirror not working! All I'm getting is the frame of the mirror, but the mirror itself is transparent with no image of what's behind me!

This is glitch which occurs in multiplayer which we're working on. Fortunately, a work-around is easy to do which enables the non-functioning mirror. Simply go to Quick Mission or Single Missions, pick any mission and select your desired Spitfire or Hurricane. Launch the mission and toggle the Mirror Command (your “M” keyboard key) on. You will see you have a functioning mirror. Exit the Single Player Mission and log into your desired multiplayer server. You will now find that your Hurricane or Spitfire will now toggle on a functioning mirror!

My gunsight is not turned on!

In the majority of aircraft there will be a small switch close to the gunsight itself that is clickable with the left mouse button. This will turn your gunsight on and off. In some cases, there is a further control to brighten or dim (for night use) the gunsight reticle. Alternatively, you can program a keyboard key to toggle the gunsight on and off per page 25 in this Installation Guide. In this case the letter “T” was used but any unassigned keyboard key or joystick button can be used.

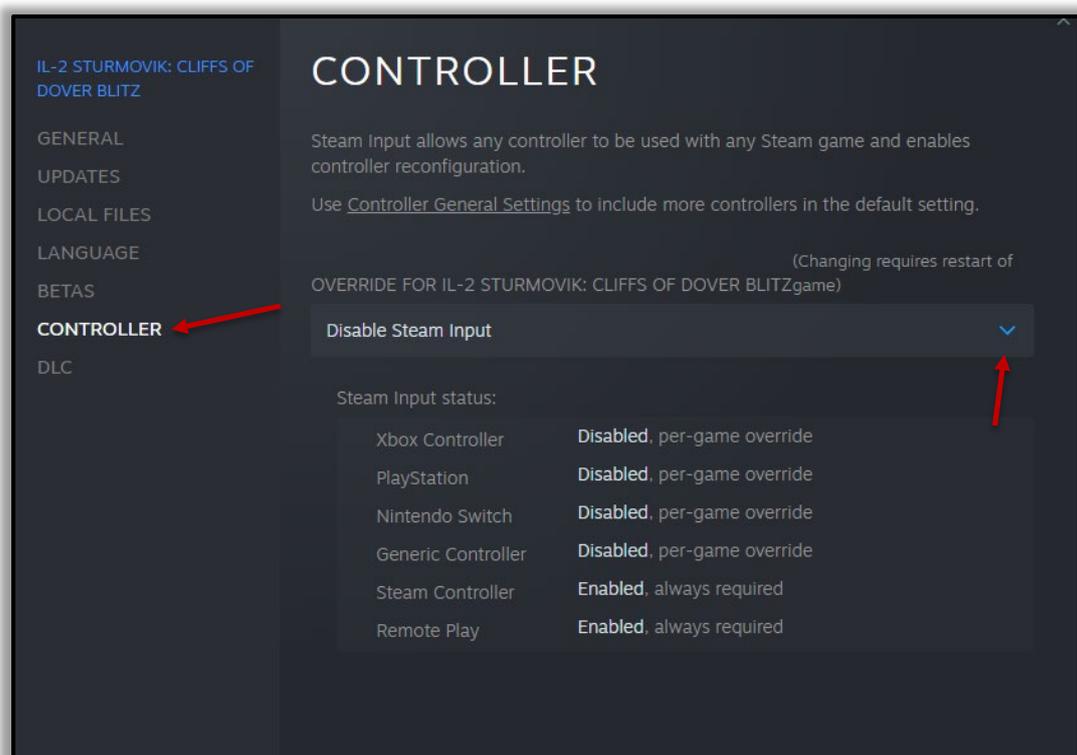
Toggle Gunsight Illumination

T

My joystick/throttle not recognized in IL-2 Sturmovik Cliffs of Dover Blitz!

My joystick and throttle are not recognized in the game when I try to set their axis and buttons. Strangely, I don't have this problem in other sims ...

The problem likely lies in Steam and, fortunately, is an easy fix. Launch Steam, go to Library, then right-click on the game listed: IL-2 Sturmovik Cliffs of Dover Blitz. Left click on Properties, click on "Controller" and then on "Use default settings", choose "Disable Steam Input" (Required restart of game). Ensure this setting is Off. Relaunch IL-2 Sturmovik Cliffs of Dover Blitz and you should find your joystick and throttle are now recognized by the game and ready to have axis and buttons assigned.



ACKNOWLEDGMENTS

Steam Input Per-Game

Thanks to Jackd for sharing this solution!

Can't Join a Multiplayer Server

Thanks Biggs for sharing this solution!

Screen freezes, stuttering or lag.

Thank you, JTDawg.

Thanks to Preystalker for providing this Microsoft link to facilitate the upgrade to Windows 10

<https://support.microsoft.com/en-us/help/3159635/windows-10-update-assistant>

"Devreorder" utility.

Thanks to TWC_Flug, who discovered it in 2016 and explains it on the ATAG forum:

<http://theairtacticalassaultgroup.com/forum/showthread.php?t=23995&p=250302#post250302>

Thrustmaster Joysticks

Many thanks to ATAG_Bubba for this information.

This Guide was compiled through the combined efforts of many in Team Fusion Simulations and the Manual Creation Group. However, the initial idea came from the work of David Rilstone, aka ATAG_Snapper, and we would all like to thank him for his inspiration.